| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 08/879,467 | 06/20/1997 | DENNIS A. DURBIN | DN38240R1 | 9545 |

7590        07/31/2002

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| EXAMINER |
|---|
| CHEN, WENPENG |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2624 | |

DATE MAILED: 07/31/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on <u>06 May 2000</u> .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) <u>1-18</u> is/are pending in the application.

    4a) Of the above claim(s) <u>8-14</u> is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-7 and 15-18</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4)☐ Interview Summary (PTO-413) Paper No(s). _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: .

## *Examiner's remark*

1.    Applicants' arguments filed on 5/6/2002 have been fully considered.

    a.    In paper #24, the Examiner relied on Bunte et al. (US patent 5,821,523 filed on 8/27/1996) as a prior art to reject Claims 1-7 and 15-18. Bunte reference is a continuation-in-part application of US application 461,605 filed on 6/5/1995 (now, US patent 5,902,988) which is related to the submitted PCT publication WO93/18478 published on 9/16/1993. The Applicants argued that neither is qualified as a prior art.

    After careful comparison, the Examiner agreed with the conclusion. Although Bunte et al. (US patent 5,821,523) claims continuation to US application 461,605, the teaching that the Examiner relied for rejection appeared first time on 8/27/1996 that is later than the effective filing date (6/21/1996) of the present application.

    Therefore, the Examiner withdraws the rejections to Claims 1-7 and 15-18 based on Bunte et al. (US patent 5,821,523) as set forth in paper #24.

    b.    Cancellation of Claims 8-14 is acknowledged.

    c.    Claims 1-7 and 15-18 are rejected over a newly found prior art as discussed below.

## *Claim Rejections - 35 USC § 102*

2.    The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

    A person shall be entitled to a patent unless –

(e) the invention was described in-
(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

3.      Claims 1, 3, and 15-18 are rejected under 35 U.S.C. 102(e) as being anticipated by

Postman et al. (US patent 6,041,374.)

        a.      With regard to Claims 1 and 3, Postman teaches a coded image capture and

decoding system (Figs. 23-24) comprising:

        -- a capture system comprising (column 7, line 52 to column 8, line 37; combination of

blocks 505 and 510 of Figs. 23-24):

                - an optical system that captures image data from coded targets; (column 7, line

52 to column 8, line 37; column 33, lines 1-12; In a day, Image data from many coded targets are

captured and stored.)

                - a first processing circuit, coupled to the optical system, that generates a plurality

of images based on image data received from the optical system; (column 7, line 52 to column 8,

line 37; the electronic parts receiving signal from photodiode 24 and generating data inputting to

PC card)

                - an image buffer, coupled to the first processing circuit, that stores the plurality

of images generated by the first processing circuit; (column 33, lines 1-12)

        -- a host system comprising (block 500 of Figs. 23-24):

- a non-dedicated second processing circuit, for coupling to the image buffer, that, at least after each of the plurality of images is stored in the image buffer and after a request by the capture system, attempts decoding processing of the plurality of images; (column 7, lines 25-51; column 33, lines 1-12; column 34, line 26 to column35, line 58; The interrupts sent by the PC card is the request. The PDA and personal computer are general-use computers and thus contain no processing circuit dedicated to a specific application. The circuit under control of CPU and a computer program dynamically changes portion of the CPU circuit to perform a specific job such as decoding at a time.)

-- wherein the number of the images is predetermined. (column 51, lines 39-41)


b.      With regard to Claims 15-18, Postman teaches a coded image capture and decoding system comprising:

-- a remote capture unit comprising (column 7, line 52 to column 8, line 37; combination of blocks 505 and 510 of Figs. 23-24):

- an image buffer that stores the plurality of images; (column 33, lines 1-12)

-- a host image processing unit, operably coupled to the remote capture unit, (block 500 of Figs. 23-24) comprising:

- a processing circuit; (column 51, line 39 to column 52, line 6; The part of circuit programmed by the barcode decode software.)

-- (1) code processing circuitry, communicatively coupled to the processing circuit, selectively directing the processing circuit to decode the plurality of coded images, wherein the processing circuit selectively responds to the code processing circuitry to control the time at

which decode processing will be performed and (2) interface circuitry that assists in delivering

the coded images to the processing circuit for decoding at least after each of the plurality of

images is stored in the image buffer; (column 51, line 39 to column 52, line 6; The part of circuit

loaded with the barcode client application 786 is the code processing circuit for directing and

controlling the decoding process. The interface 800 in the PC card shown in Fig. 37 is the

interface.)

- the interface circuitry utilizes wireless transmissions. (column 20, lines 1-7)

*Claim Rejections - 35 USC § 103*

4.      The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

5.      Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Postman as

applied to Claim 1 above, and further in view of Metlitsky et al. (US patent 5,545,886 cited

previously.)

Postman teaches the parent Claim 1. However, Postman does not explicitly teach that a

composite image is formed from the images as required.

Metlitsky teaches:

-- capturing a plurality of images from a target by multiple scans; (column 11, lines 41-52; Each scan generates an image.)

-- wherein the number of the images is predetermined; (column 9, lines 26-36)

-- constructing a composite image from the captured images. (column 11, lines 41-52.)

It is desired to enhance reliability of decoding of a bar code. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to apply Metlitsky's teaching to process the images derived from a target using Postman's remote capture unit and deliver the image to Postman's host system to form a composite image for decoding, the combination enhances reliability of decoding of the bar codes.

6.     Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Postman as applied to Claim 1 above, and further in view of Grodevant (US patent 5,260,554 cited previously.)

Postman teaches the parent claim 1. However, it does not teach using proximity screening as recited in the claims.

Grodevant teaches:

-- performing proximity screening of image data from the optical system and initiates a capturing cycle. (column 4, lines 31-66)

It is desired to be able to initiate decoding of a bar code automatically. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to apply Grodevant's proximity screening to initiate image capturing of bar codes for decoding to achieve automatic

examination of bar codes on objects taught by Postman, because the combination improves

efficiency of bar-code reading.

7.      Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Postman as

applied to Claim 1 above, and further in view of Tymes (US patent 5,157,687 cited previously.)

Postman teaches the parent Claim 1. However, Postman does not explicitly teach that the

recited transition points.

Tymes teaches that a processing circuit converts the image data into a plurality of

transition points. (column 11, lines 4-30)

It is desired to facilitate decoding of a bar code. It would have been obvious to one of

ordinary skill in the art, at the time of the invention, to combine Tymes 's and Postman's

teachings to convert Postman's image data into a plurality of transition points for decoding, the

combination facilitates decoding of the bar codes because it provides a better signature of a

barcode.

8.      Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Postman as

applied to claim 1 above, and further in view of Park (US patent 5,675,424 listed in paper #4.)

Postman teaches the parent claim 1. However, Postman does not teach parallel decoding

as recited.

Park teaches a parallel decoding method. (Fig. 4; column 3, lines 14-39)

It is desired to be able to use a low-speed decoder as well as high-speed decoder to

decode bar codes and images. As taught by Park, decoding in parallel with a set of decoders can

speed up its overall decoding speed. It would have been obvious to one of ordinary skill in the

art, at the time of the invention, to use parallel decoding taught by Park in the system taught by

Postman to decode bar codes, because the combination expands the capability of the system by

increasing process speed or allowing the use of low-speed processors.

*Conclusion*

9.      Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Wenpeng Chen whose telephone number is 703 306-2796. The

examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David K Moore can be reached on 703 308-7452. The fax phone numbers for the

organization where this application or proceeding is assigned are 703-872-9314 for regular

communications and 703-872-9314 for After Final communications. TC 2600's customer service

number is 703-306-0377.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is 703 305-4700.

Wenpeng  Chen
Primary Examiner
Art Unit 2624

July 29, 2002